

REMARKS

The Examiner is thanked for the thorough examination of the application. No new matter is believed to be added to the application by this Amendment.

Entry of Amendment

Entry of this Amendment under 37 C.F.R. § 1.116 is respectfully requested because it places the application in condition for allowance. Also, this Amendment instantly overcomes the Examiner's objection to the drawings and rejection under 335 U.S.C. § 112, thereby reducing issues for appeal.

Status Of The Claims

Claims 1-3, 5-10, 23, 24, 26 and 28-30 are pending in the application. The amendments to claims 1, 7 and 23 find support in Figure 4 of the application and in the specification at page 10, lines 3-11.

Objection To The Drawings

The Examiner objects to the drawings as not showing every feature in the claims. The Examiner asserts that the "opposite side entirely overlapping an adjacent gate line" must be shown or the feature(s) canceled from the claims.

The Examiner comments have been considered, and the claims have been amended to replace the "entirely overlapping" limitation with "substantially overlapping", which is clearly depicted in Figure 4 of the application and is discussed in the specification at page 10, lines 3-11.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 1-3, 5-10, 23, 24, 26 and 28-30 have been rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement.

At page 4 of the Office Action, the Examiner asserts that the “entirely overlapping” limitation was not disclosed in the original disclosure. However, the “entirely overlapping” limitation has been replaced with “substantially overlapping”, which is clearly set forth in Figure 4 and in the specification at page 10, lines 3-11. The claims are therefore in full compliance with the written description requirement.

This rejection is overcome and withdrawal thereof is respectfully requested.

Rejections Based Upon Kubo

Claims 1-6 and 23, 24, 26, 28 and 30 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kubo (U.S. Patent 6,295,109) in view of Song (U.S. Patent 6,091,464) and Faris (U.S. Patent 6,133,980).

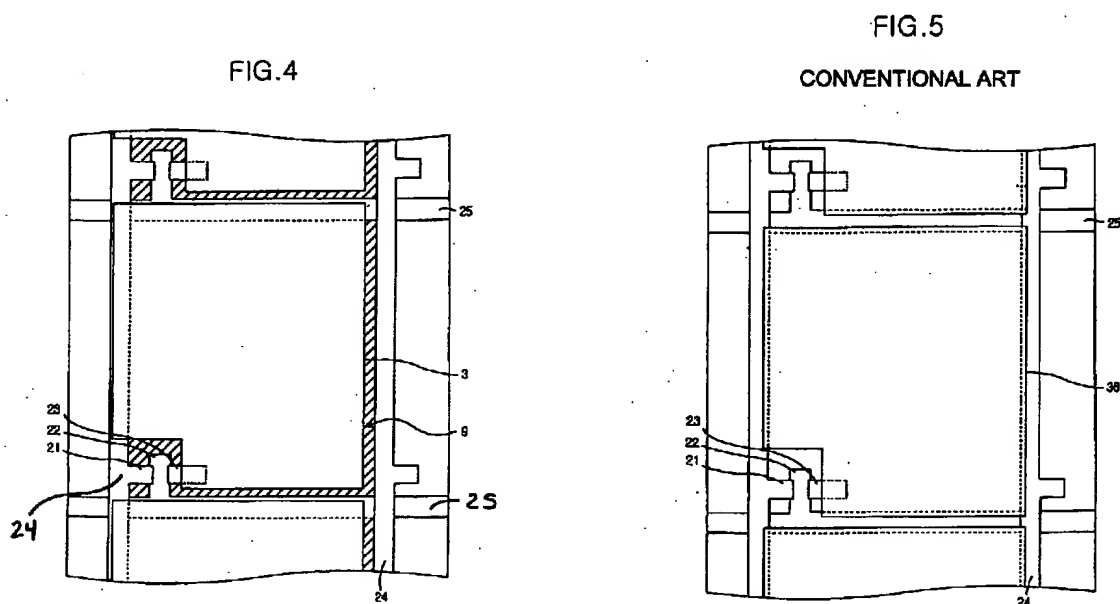
Claims 7-10 and 29 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kubo in view of Song.

Claims 1-6, 23, 24, 26, 28 and 30 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kubo in view of Stupp (U.S. Patent 5,929,463) and Faris.

Claims 7-10 and 29 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kubo in view of Stupp.

Applicant traverses all of the aforesaid rejections and respectfully requests reconsideration and withdrawal thereof.

The present invention pertains to a transmission-reflective type liquid crystal display device that, as is typically set forth in the independent claims, includes a reflecting film functioning as a pixel electrode that substantially overlaps data and gate lines of the pixel. The advantages of the present invention over the conventional art can be better understood by comparing Figure 4 of the present invention to the conventional art depicted in Figure 5, below.



As explained at page 9, lines 20-24 of the specification, the reflecting film 36 overlaps with every *inner edge* of the gate line 25 and the data line in order to form storage capacitance in the conventional art of Figure 5. However, as is explained at page 10, lines 3-11 of the specification, the reflecting film 3 of the present invention *substantially overlaps*, i.e., overlaps the greater part of the gate line 25 and the data line 24 to form storage capacitance.

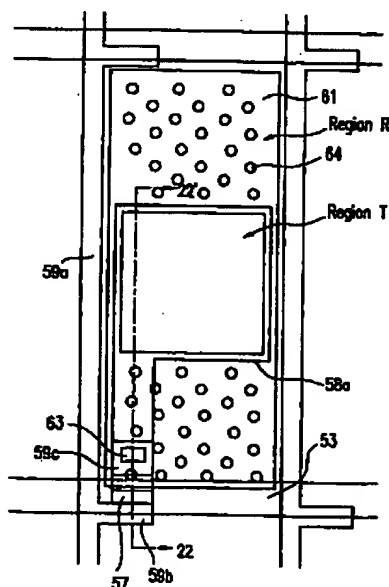
Kubo pertains to an LCD having pixels with reflective and transmissive regions. The Examiner points to Figures 2, 3, 21 and 22 of Kubo, which show polarizers 6, 9, quarter wave

plates 7, 10, substrates 1, 2, transmissive electrode 4, reflective/transmissive electrode regions 3, 8 and a liquid crystal layer 5.

At page 7 , lines 1-9 of the Office Action (and at page 13, lines 1-7), the Examiner unequivocally admits to some of the failures of Kubo, including 1) the failure to disclose a light transmitting region between an inner edge of a gate line and a side of the outer edge periphery of the reflecting film in each pixel, such that the opposite side entirely overlaps an adjacent gate line; and 2) the failure to disclose a circular polarizer made of cholesteric liquid crystal polarizer including a right handed pitch, pitch values p of λ/n and a wavelength of 380 nm to 800 nm.

However, Kubo additionally fails to disclose or suggest a reflection film acting as a pixel electrode that substantially overlaps both the gate line and the data line in the pixel, such as is set forth in independent claims 1, 7 and 23 of the present invention. This failure of Kubo can be readily observed in Figure 21 of the patent, which is depicted below.

FIG.21



The Examiner turns to Figures 1 and 2 of Song, which show a gate line 10 and a partially overlapped portion of the pixel electrode 30 that serves a storage capacitor 70. However, Figures 1 and 2 of Song (reproduced below) clearly fail to show a pixel electrode that substantially overlaps both the data line and the gate line of the pixel, such as is set forth in independent claims 1, 7 and 23 of the present invention.

FIG. 1 PRIOR ART

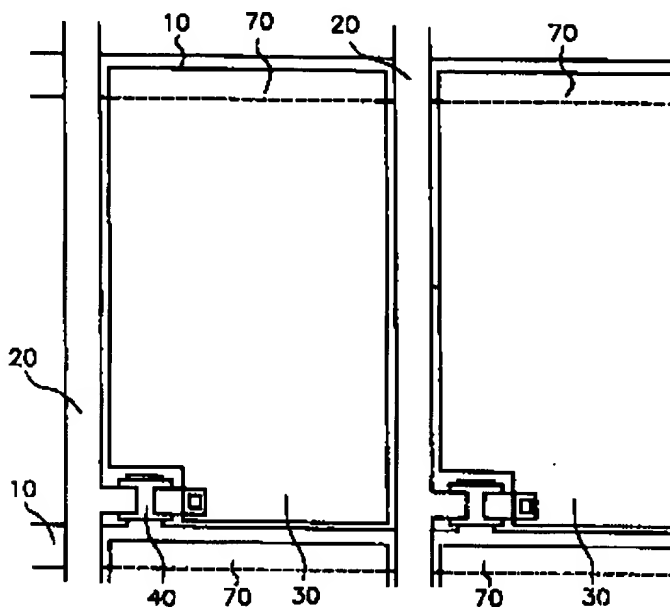
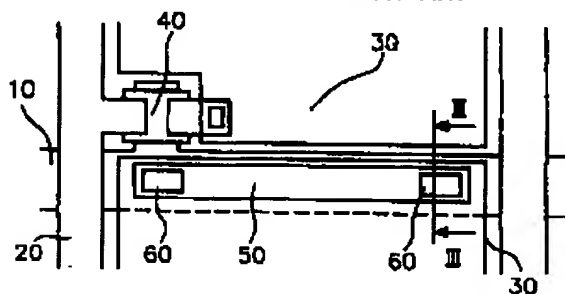
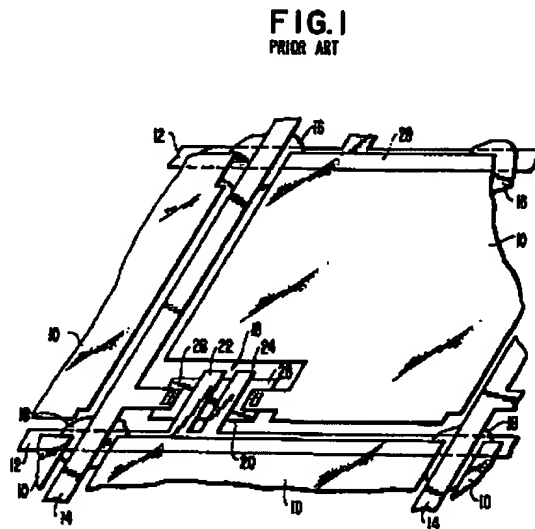


FIG. 2 PRIOR ART



Similarly, the Examiner turns to Figure 1 of Stupp, which shows a gate line 12 and a partially overlapped portion of the pixel electrode 10 that serves as a storage capacitor.

However, analogous to Song, there is no teaching or suggestion in Stupp of substantially overlapping both the adjacent gate line and data line in the pixel, as is set forth in independent claims 1, 7 and 23 of the present invention.



The Examiner turns to the teachings of Faris for teachings pertaining to pitch values p of λ/n and for wavelength $\lambda = 400 \text{ nm} - 800 \text{ nm}$. However, these teachings of Faris fail to address the deficiencies of Kubo, Song and Stupp in teaching or suggesting a pixel electrode that substantially covers both the gate line and the data line of the pixel, such as is set forth in independent claims 1, 7 and 23 of the present invention.

As a result, one of ordinary skill in the art would not be motivated by any combination of the cited art to produce independent claims 1, 7 and 23 of the present invention. A *prima facie* case of obviousness has thus not been made. Claims depending upon claim 1, 7 or 23 are patentable for at least the above reasons. These rejections are overcome and withdrawal thereof is respectfully requested.

Foreign Priority

The Examiner has acknowledged perfection of foreign priority at page 2, lines 9-12 of the Office Action mailed October 3, 2005.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

Application No. 09/559,403
Amendment dated January 8, 2007
Reply to Office Action of October 6, 2006

Docket No.: 0465-0711P
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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: January 8, 2007

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